

Development of the DOE Nuclear Criticality Safety Program Web Site for the Nuclear Criticality Safety Professional

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Development of
the DOE Nuclear Criticality Safety Program Web Site
for the
Nuclear Criticality Safety Professional

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Introduction

Development of the DOE Nuclear Criticality Safety Program (NCSP) web site is the result of the efforts of many members of the Nuclear Criticality Safety (NCS) community and is maintained by Lawrence Livermore National Laboratory under the direction of the NCSP Management Team. This World Wide Web (WWW) resource was developed as part of the DOE response to the DNFSB Recommendation 97-2, which reflected the need to make criticality safety information available to a wide audience. The NCSP web site provides information of interest to NCS professionals and includes links to other sites actively involved in the collection and dissemination of criticality safety information. To the extent possible, the hyperlinks on this web site direct the user to the original source of the referenced material in order to ensure access to the latest, most accurate version.

This site is intended to provide a central location for access to relevant NCS information in a user-friendly environment for the criticality safety community.

Among the features included here are:

- a user friendly site map for ease of use;
- links to all major laboratories and organizations involved in the many aspects of criticality safety;
- collections of bibliographic references and validation experiments;
- general help for new criticality safety practitioners including basic technical references and training modules;
- a discussion of computational methods;
- an email directory listing of nuclear criticality safety professionals; and
- an interactive question and answer forum for the criticality safety community.

NCSP Web Site Description

The NCSP web site serves as one of the major communication forums to provide updated news and announcements related to nuclear criticality safety to the NCS community. The web site also provides an organized set of high level links to various DOE and other sites including the DNFSB, NRC, ANS, and ANSI-8.1 Standards web sites. Any visitors who use the site are encouraged to register in the email directory to facilitate communication between NCS practitioners around the world. This web site has a user-friendly site navigational map for easy access to different sections and topics so that a user can easily locate the right section of the site without spending unnecessary time searching for the

right information. The information on this site is coordinated with the DOE Criticality Safety Support Group, which constantly provides up-to-date accurate information.

A valuable part of the web site is access to several databases of bibliographic references and validation experiments. The first database, the LLNL database, contains over four thousand entries of bibliographic references covering the time period between January 1982 and August 1999. The second database, the Hanford database, contains over three thousand entries of references data. Both databases are organized in a user-friendly search engine environment where a user can easily search the contents by subject, author, abstract, and published date.

To facilitate its use, the NCSP web site contains a listing of pre-searched texts related to DOE Orders and Standards relevant to nuclear criticality safety. A user can easily download those texts to his or her computer for offline viewing. To enhance communication between new and veteran NCS professionals, this web site has a messages board section that may be used to ask questions and provide comments. To enhance criticality safety training, the web site provides six training modules – “Introductory Nuclear Criticality Physics”, “Neutron Interactions”, “The Fission Chain Reaction”, “Neutron Scattering and Moderation”, “Criticality Safety Limits”, and “Introduction to Diffusion Theory”, with more modules planned.

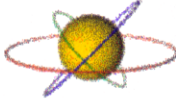
The site also contains a voluntary registry of professional information. This service is provided to disseminate point of contact information that allows NCS practitioners around the world to easily initiate discussions with others in the field of criticality safety.

NCSP Web Site Statistics

This web site provided free access to DOE related news and other NCS related information to more than 4600 visitors last year. There are over several hundred registered users who frequently use the NCSP web site as an information tool. Many visitors also utilize this web site as a portal to other DOE and NCS related web sites. There have been over a thousand downloads of the Nuclear Criticality Safety Engineer Training modules. The two bibliographic references databases are the most used section of the web site, handling over 7000 accesses and searches.

As a part of this poster session, there will be computer equipment to allow on-site demonstration and hand-on exploration of the web site.

The following is the NCSP website navigational site map.



U. S. Department of Energy
Nuclear Criticality Safety Program

Site Map

DOE Nuclear Criticality Safety Engineer Training modules four and fi

Master Index of Data and References

Descriptions and links to a variety of databases including published reference material, benchmark experiments and experimental data.

Basic Nuclear Criticality Safety Information

An introduction to the field of criticality safety, a basic reference set for new practitioners, sample criticality safety evaluations, frequently asked questions and more.

Nuclear Criticality Safety Engineer Training

Links to series of training modules being developed by DOE Nuclear Criticality Safety Program to assist site training organizations in developing a comprehensive criticality safety training program.

Nuclear Criticality Safety related DOE Orders, Regulations, and Standards

Links to various WWW sites containing DOE Orders, DOE Standards, NRC Regulatory Guides, and ANSI Standards.

Other Internet Resources

A hot list of links to an assortment of Nuclear Criticality Safety related WWW sites around the world.

How to contribute info to this Website

Information containing on who to contact and how to contribute to this web site.

DOE Criticality Safety Organizations and Groups

Links to an assortment of formal and informal groups actively involved in criticality safety within the DOE, including the Nuclear Criticality Safety Program Management Team, the Criticality Safety Coordinating Team and the Endusers Group.

U.S. DOE NCSP Five Year Plan

The DOE Nuclear Criticality Safety Program Five Year Plan is a comprehensive plan that integrates seven technical elements into a program that provides for the maintenance of a stable, cross-organizational criticality safety infrastructure while improving the technical basis of criticality safety practices. The Executive Summary provides an introduction to the Five Year Plan.

Training and Conference News

Contain detail information on schedule, location, and workshop agenda for training/conferences.

DNFSE Actions and Operating Experience


Links to Defense Nuclear Facilities Safety Board regarding recommendations and actions, DOE Operating Experience Weekly Summaries.

Criticality Safety Codes and Data

Descriptions of the codes and code systems used in criticality safety analyses and links to the sites supporting those codes.

Messages Board

This message board was provided to encourage communication among various criticality safety professionals in the DOE Complex. It is the responsibility of the personnel participating in the message board to provide accurate and meaningful dialogue to enhance communication process.



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